

SCIENTIFIC NOTES.

THE MONEY MARKET.

ZINC COATING.—Copper and brass may be coated with zinc by immersing the article to be coated in a boiling bath of sal-ammoniac containing either sheet or powdered zinc. The zinc thus deposited is brilliant and durable.

A SUBSTITUTE FOR ALBUMEN IN ANILINE DYING.—A compound of glue and tannic acid is thrown down when tungstate of soda, hydrochloric acid, and a thick solution of glue are mixed. When heated to about 100° F., this compound is hard and plastic that it may be drawn into sheets which have been successively dried and rolled. This substance has been successfully employed instead of albumen in fixing amateur copies upon cotton.

LATHARGE AND GLYCERINE.—M. Rost has made a material suited to a variety of purposes by mixing protoxide of lead (latharge) and glycerine so that they form a creamy liquid. In a short time the mixture becomes a hard and homogeneous mass, which adheres to metal and resists the action of water and steam, and is not reduced to a temperature of 527° F. It is a varnish, and, in the full state, may be used in galvanoplastic copying.

COMPRESSED LEATHER SCRAPS.—An article in Dugler's *Polytechnic Journal* gives a process for utilizing leather shavings and scraps. They are first cleaned, then put into a water containing 1 per cent of sulphuric acid until the material becomes soft and plastic, and afterward compressed into blocks and heated to steam. In order to soften the material, they are placed in steam added to a tank of mineral oil; they are then passed through rollers, and brought to the proper thickness to be used as inner soles of boots and shoes.

KAGLIN.—Dr. C. Bischoff describes in Dinger's *Polytechnic Journal*, a series of experiments made with parafin clay from ten different localities, his object being to determine the value of these various kinds of kaolin by means of a pyrometric method. The standard sample was the levigated kaolin from Zettlitz, Bohemia. This consists, in 100 parts of alumina, 32.4% chemically combined with water, 54.8% water-soluble magnesium, 0.6%, case-pumice, of iron, 6.6% potash, and 0.1% lignite.

The sample, in powder, was

compressed into the shape of small cylinders, and then heated to the temperature of the melting point of parafin by itself, the flux of one to two-tenths of the weight of the kaolin was added, and the cylinders were again subjected to the same high temperature.

In the same manner, the several samples from other localities were

were treated, and the following results obtained:—

1. Kaolin from Zettlitz, 100°.

2. Kaolin from Idar, 97°.

3. Kaolin from Elberfeld, 94°.

4. Kaolin from Altena, 90°.

5. Kaolin from Zerbst, 89°.

6. Kaolin from Krupp, 84°.

7. Kaolin from Dux, 82°.

8. Kaolin from Elberfeld, 80°.

9. Kaolin from Elberfeld, 78°.

10. Kaolin from Zettlitz, 75°.

11. Kaolin from Idar, 72°.

12. Kaolin from Elberfeld, 70°.

13. Kaolin from Zerbst, 68°.

14. Kaolin from Elberfeld, 65°.

15. Kaolin from Elberfeld, 62°.

16. Kaolin from Elberfeld, 59°.

17. Kaolin from Elberfeld, 57°.

18. Kaolin from Elberfeld, 55°.

19. Kaolin from Elberfeld, 53°.

20. Kaolin from Elberfeld, 51°.

21. Kaolin from Elberfeld, 49°.

22. Kaolin from Elberfeld, 47°.

23. Kaolin from Elberfeld, 45°.

24. Kaolin from Elberfeld, 43°.

25. Kaolin from Elberfeld, 41°.

26. Kaolin from Elberfeld, 39°.

27. Kaolin from Elberfeld, 37°.

28. Kaolin from Elberfeld, 35°.

29. Kaolin from Elberfeld, 33°.

30. Kaolin from Elberfeld, 31°.

31. Kaolin from Elberfeld, 29°.

32. Kaolin from Elberfeld, 27°.

33. Kaolin from Elberfeld, 25°.

34. Kaolin from Elberfeld, 23°.

35. Kaolin from Elberfeld, 21°.

36. Kaolin from Elberfeld, 19°.

37. Kaolin from Elberfeld, 17°.

38. Kaolin from Elberfeld, 15°.

39. Kaolin from Elberfeld, 13°.

40. Kaolin from Elberfeld, 11°.

41. Kaolin from Elberfeld, 9°.

42. Kaolin from Elberfeld, 7°.

43. Kaolin from Elberfeld, 5°.

44. Kaolin from Elberfeld, 3°.

45. Kaolin from Elberfeld, 1°.

46. Kaolin from Elberfeld, -2°.

47. Kaolin from Elberfeld, -4°.

48. Kaolin from Elberfeld, -6°.

49. Kaolin from Elberfeld, -8°.

50. Kaolin from Elberfeld, -10°.

51. Kaolin from Elberfeld, -12°.

52. Kaolin from Elberfeld, -14°.

53. Kaolin from Elberfeld, -16°.

54. Kaolin from Elberfeld, -18°.

55. Kaolin from Elberfeld, -20°.

56. Kaolin from Elberfeld, -22°.

57. Kaolin from Elberfeld, -24°.

58. Kaolin from Elberfeld, -26°.

59. Kaolin from Elberfeld, -28°.

60. Kaolin from Elberfeld, -30°.

61. Kaolin from Elberfeld, -32°.

62. Kaolin from Elberfeld, -34°.

63. Kaolin from Elberfeld, -36°.

64. Kaolin from Elberfeld, -38°.

65. Kaolin from Elberfeld, -40°.

66. Kaolin from Elberfeld, -42°.

67. Kaolin from Elberfeld, -44°.

68. Kaolin from Elberfeld, -46°.

69. Kaolin from Elberfeld, -48°.

70. Kaolin from Elberfeld, -50°.

71. Kaolin from Elberfeld, -52°.

72. Kaolin from Elberfeld, -54°.

73. Kaolin from Elberfeld, -56°.

74. Kaolin from Elberfeld, -58°.

75. Kaolin from Elberfeld, -60°.

76. Kaolin from Elberfeld, -62°.

77. Kaolin from Elberfeld, -64°.

78. Kaolin from Elberfeld, -66°.

79. Kaolin from Elberfeld, -68°.

80. Kaolin from Elberfeld, -70°.

81. Kaolin from Elberfeld, -72°.

82. Kaolin from Elberfeld, -74°.

83. Kaolin from Elberfeld, -76°.

84. Kaolin from Elberfeld, -78°.

85. Kaolin from Elberfeld, -80°.

86. Kaolin from Elberfeld, -82°.

87. Kaolin from Elberfeld, -84°.

88. Kaolin from Elberfeld, -86°.

89. Kaolin from Elberfeld, -88°.

90. Kaolin from Elberfeld, -90°.

91. Kaolin from Elberfeld, -92°.

92. Kaolin from Elberfeld, -94°.

93. Kaolin from Elberfeld, -96°.

94. Kaolin from Elberfeld, -98°.

95. Kaolin from Elberfeld, -100°.

96. Kaolin from Elberfeld, -102°.

97. Kaolin from Elberfeld, -104°.

98. Kaolin from Elberfeld, -106°.

99. Kaolin from Elberfeld, -108°.

100. Kaolin from Elberfeld, -110°.

101. Kaolin from Elberfeld, -112°.

102. Kaolin from Elberfeld, -114°.

103. Kaolin from Elberfeld, -116°.

104. Kaolin from Elberfeld, -118°.

105. Kaolin from Elberfeld, -120°.

106. Kaolin from Elberfeld, -122°.

107. Kaolin from Elberfeld, -124°.

108. Kaolin from Elberfeld, -126°.

109. Kaolin from Elberfeld, -128°.

110. Kaolin from Elberfeld, -130°.

111. Kaolin from Elberfeld, -132°.

112. Kaolin from Elberfeld, -134°.

113. Kaolin from Elberfeld, -136°.

114. Kaolin from Elberfeld, -138°.

115. Kaolin from Elberfeld, -140°.

116. Kaolin from Elberfeld, -142°.

117. Kaolin from Elberfeld, -144°.

118. Kaolin from Elberfeld, -146°.

119. Kaolin from Elberfeld, -148°.

120. Kaolin from Elberfeld, -150°.

121. Kaolin from Elberfeld, -152°.

122. Kaolin from Elberfeld, -154°.

123. Kaolin from Elberfeld, -156°.

124. Kaolin from Elberfeld, -158°.

125. Kaolin from Elberfeld, -160°.

126. Kaolin from Elberfeld, -162°.

127. Kaolin from Elberfeld, -164°.

128. Kaolin from Elberfeld, -166°.

129. Kaolin from Elberfeld, -168°.

130. Kaolin from Elberfeld, -170°.

131. Kaolin from Elberfeld, -172°.

132. Kaolin from Elberfeld, -174°.

133. Kaolin from Elberfeld, -176°.

134. Kaolin from Elberfeld, -178°.

135. Kaolin from Elberfeld, -180°.

136. Kaolin from Elberfeld, -182°.

137. Kaolin from Elberfeld, -184°.

138. Kaolin from Elberfeld, -186°.

</